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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/489,515	01/21/2000	Surya Prakash	06618-408001	5938

20985 7590 12/27/2002

FISH & RICHARDSON, PC  
4350 LA JOLLA VILLAGE DRIVE  
SUITE 500  
SAN DIEGO, CA 92122

EXAMINER

MERCADO, JULIAN A

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 12/27/2002

Please find below and/or attached an Office communication concerning this application or proceeding.



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**Office Action Summary**

Application No.

09/489,515

Applicant(s)

PRAKASH ET AL.

Examiner

Julian Mercado

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 July 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 6-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 6-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

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## DETAILED ACTION

### *Remarks*

This Office Action is responsive to Applicant's amendment filed July 25, 2002.

The rejection of claims 7-10, 16, 24 and 25 under 35 U.S.C. 112, second paragraph has been withdrawn.

### *Claim Rejections - 35 USC § 102 and 103*

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 6-9, 11, 12, 14, 15, 17-22, 25 and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Cabasso et al.

Claims 16 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cabasso et al. as applied to claims 6-9, 11, 12, 14, 15, 17-22, 25 and 26 above.

Claims 10 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cabasso et al. as applied to claims 6-9, 11, 12, 14, 15, 17-22, 25 and 26 above, in view of Kindler.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cabasso et al. as applied to claims 6-9, 11, 12, 14, 15, 17-22, 25 and 26 above, in view of Scherer et al.

The above rejections have been discussed in detail in the previous Office Action. The examiner notes that Applicant's amendment to the present claims appear to have been submitted

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only to obviate the ground of rejection under 35 U.S.C. 112, second paragraph. The scope of the present claims are substantially similar if not identical to those considered in the previous Office Action. Thus, the prior art rejections are maintained for the reasons of record.

### *Response to Arguments*

Applicant's arguments filed with the July 25, 2002 amendment have been fully considered but they are not persuasive.

Applicant submits that in the '325 Patent, poly(vinylidene fluoride) is not used as part of the catalyst ink mixture [emphasis as submitted] but instead "added to carbon particles to form the basic matrix of the gas diffusion electrodes". Applicant is correct to the extent that the electrodes employ poly(vinylidene fluoride) added to carbon particles. (col. 9 line 53-58) However, as found in col. 10 line 9-14, a catalyst ink is disclosed to mix, i.e. suspend poly(vinylidene fluoride) with a catalytic material such as Pt. Clearly, the catalyst ink mixture also has poly(vinylidene fluoride). Thus, Applicant's line of argument and understanding of the patentee's teaching appears contrary to that which is disclosed by the '325 Patent.

As to the '325 Patent allegedly not teaching that the plasticizer, i.e. DMF is used in the catalyst ink, in reply and as a matter of clarification the examiner cites col. 10 line 61 et seq., wherein Pt. is suspended in poly(vinylidene fluoride) in DMF solution.

Applicant's argument that the examiner's conclusion of obviousness is based on hindsight reasoning is noted. It is noted, however, that Applicant did not specifically address the examiner's reasoning for the claimed "roughening" step; as set forth in the previous Office Action, roughening of the membrane would be obvious to the skilled artisan for reasons such as

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increasing the surface area of the membrane. In Cabasso, an increased surface area is exemplified by the patentee's preference for carbon cloth or carbon paper over a glass substrate. (col. 9 line 8-19) It would naturally flow that an increase in surface area results from the increased anisotropic structure of a carbon cloth or paper when coated with the catalyst layer.

Arguments against the '008 Patent appear to be directed to this reference failing to remedy alleged differences between the '325 Patent and the present claims. However, in view of the '325 Patent being maintained for the reasons discussed above, the rejection in view of the '008 Patent is subsequently maintained for the reasons discussed in the previous Office Action.

#### **Conclusion**

The prior art relied upon in this Office Action will not be provided, since it is the same prior art presently of record in the Application.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

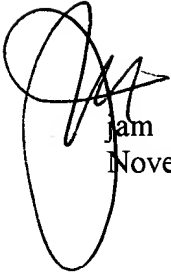
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (703) 305-0511. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (703) 308-2383. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

  
jam  
November 8, 2002

  
Patrick Ryan  
Supervisory Patent Examiner  
Technology Center 1730